

## **ABSTRACT**

### **QUADRUPOLE MASS FILTER**

Apparatus and method to improve the filtering action of a quadrupole mass filter by reducing a precursor fault caused by an asymmetric electrical field between a pair of opposing electrode rods in a y-axis of the quadrupole mass filter. Processing means for processing detector data determine the filtering action of the quadrupole mass filter by checking for a precursor fault. If a precursor fault is detected then power supply control means introduce an AC potential difference across the electrode rods in the y-axis in order to reduce asymmetry in the electrical field in the y-axis.